

## REMARKS

Applicant appreciates the Examiner's review and comments. Applicant has endeavored to amend the application in response to the Examiner's comments and respectfully requests reconsideration in view of the amendments above and the remarks below.

### **Rejection under 35 U.S.C. § 112**

The Examiner has rejected claims 1, 5, 13, 14, and 15 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as the invention. Specifically, these claims are rejected as being incomplete for omitting essential steps of 1) showing who marks the message structure as ready to transmit; 2) showing how the message structure is marked as ready to transmit; and 3) showing when the message structure is marked as ready to transmit.

The enqueue process of the present invention marks the message structure. The message structure is marked ready for transmit by a ready flag, established and set by the enqueue process itself.

Generally, the enqueue process (as shown in Fig. 2) includes the steps of enqueuing data into the Ferris Wheel buffer. First, the enqueue process determines the number of Ferris-Wheel seats required for the data to be enqueued 74. Second, it requests the required number of seats. If the request is granted then the appropriate number of seat handles (indices into the buffer) will be allocated. Third, after the seats have been allocated, the enqueue process loads data into each of the seats. Fourth, after all data has been loaded into the seats, the process sets the seat control data. *Fifth, the process provides a ready flag which indicates the message in the seat is ready to transmit.*

Specification, p.9, ll.10-18 (emphasis added).

Applicant has amended claims 1, 5, and 13-15 to further define and claim this process of marking the message structure. Applicant respectfully submits that these amendments place the claims in a condition of allowance over the 35 U.S.C. § 112, second paragraph, rejections.

### **Rejections under 35 U.S.C. § 103**

The Examiner maintains rejections under 35 U.S.C. § 103(a) for claims 1-15 as being obvious from Vahalia, et al. (U.S. Patent No. 6,298,386), in view of IBM Technical Disclosure Bulletin Vol. 40, No. 5, May 1997, and further in view of Patrick, U.S. Patent No. 5,142,624. Applicant respectfully traverses this rejection.

The Examiner found the previous arguments and amendments against the cited prior art of Vahalia and the IBM Technical Disclosure Bulletin as being persuasive. Applicant has previously noted that Vahalia is not a ferris-wheel queue process. A ferris-wheel queue allows multiple processes to have access to the queue in an interleaving fashion.

The 'Ferris-Wheel Queue' data structure supports the buffering of data generated by multiple processes being executed in a single multiprocessing system. The multiple processes may each access this queue in an interleaving fashion, without the data being combined with data of other processes. Specification, p.8, ll.6-9 (emphasis added).

Some queues in the prior art, such as Vahalia, rely on a queuing order of first in-first out (FIFO) or first in-last out (FILO). A ferris-wheel queue, as designed and operated, does not perform in either a FIFO or FILO manner.

Applicant also noted that Vahalia did not perform a round robin search. Importantly, Applicant pointed out that there is no need for Vahalia to perform a *deque* round robin search since it operates a first-out buffer. Moreover, Vahalia cannot support a round robin search as taught and disclosed, since such a round robin search would require a number of message

structures that are not available to Vahalia. These message structures, absent in Vahalia, are evident in the present invention.

The preferred embodiment of the Ferris-Wheel buffer is characterized as a circular array of message structures. The message structures are a set of control variables, such as, "Message Ready", "Message Size", "Last Handle", "Read Index"; and "Message Buffer".

Specification, p.13, ll.8-11.

The main controlling function in the dequeuing process of the present invention is a read function. It is the read function that checks the ferris-wheel in a round robin search method for a seat which is marked as ready to transmit. Specification, p.13, ll.22-25. Vahalia simply outputs the first queue that came in (FIFO), in a sequentially, orderly fashion. Thus, combining Vahalia with the IBM Technical Bulletin and Patrick will not make the combination obvious over the present invention since Vahalia does not teach, disclose, or suggest an adaptation to this type of search. It is not simply that Vahalia does not suggest a round robin search; but, by virtue of its FIFO, sequential queue, Applicant submits that Vahalia teaches away from the methodology of the present invention.

In the present invention, the transmitted data is not the first data in, but may be in any order independent of the order in which it was received. Vahalia does not teach, disclose, or suggest this type of transmission order, and most importantly, is incapable of supporting this transmission order without significant modification to its operating software.

Furthermore, in rejecting claims 16, 17, and 20 under 35 U.S.C. § 103(a), the Examiner states that the cited prior art of Vahalia, the IBM Technical Bulletin, and Patrick fail to specifically disclose a two-dimensional circular array. Applicant concurs. Based on this admission, Applicant respectfully challenges the rejection of claims 1, 5, 13, 14, and 15 by the

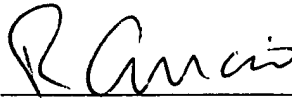
combined art of Vahalia, IBM Technical Bulletin, and Patrick, since the present invention teaches a ferris-wheel (i.e., circular) queue process.

Referring to the specific rejections of claims 16, 17, and 20 under 35 U.S.C. § 103(a), the Examiner cites Vahalia, in view of the IBM Technical Bulletin, Patrick, and Jiang, et al. (U.S. Patent No. 6,614,441). Applicant traverses this rejection as well. Jiang teaches a wrap-around buffer forming a circular queue. Jiang, col.5, ll.40-45. However, Jiang does not teach, disclose, or suggest using this circular queue in a ferris-wheel queuing fashion. In fact, Jiang teaches away from such usage, storing video data *sequentially* in multiple buffers and overwriting an image "only after the image has been displayed on the display monitor." Jiang, col.5, ll.55-61. The data in Jiang is not only stored sequentially, but also displayed sequentially, moving "from one buffer to the next buffer in the frame buffer 160 in order to provide a visual display of consecutive images on the display monitor." Jiang, col.5, ll.61-65. Operating in a ferris-wheel queue fashion would defeat Jiang's display of consecutive video images. Consequently, Jiang's sequential storage and consecutive image display teaches away from the kind of data storage and selection taught by the present invention. By its own teachings and workings, Jiang does not teach a ferris-wheel queue, or any application within the confines of a ferris-wheel queue architecture. Applicant submits that the combination of Vahalia, IBM Technical Bulletin, Patrick, and Jiang does not disclose, teach, or suggest the process of the present invention.

By argument and amendment, as provided above, it is respectfully submitted that the application has now been brought into a condition where allowance of the entire case is proper.

Reconsideration and issuance of a notice of allowance are respectfully solicited.

Respectfully submitted,




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